

## XP-002289642

AN - 1997-208089 [19]  
AP - JP19950220660 19950829  
CPY - TORA  
DC - A23 D22 E37 P42 P73  
DR - 1550-U 1966-U  
FS - CPI;GMPI  
IC - A01N59/16 ; A01N61/00 ; B05D7/04 ; B05D7/24 ; B29C47/06 ; B29C55/12 ;  
B29K67/00 ; B29L9/00 ; B32B27/18 ; B32B27/36 ; C08J7/04 ; C08K3/08 ;  
C08L67/00  
MC - A05-E01D3 A08-M02 A12-S06C1 D09-A E35-B  
M3 - [01] A100 A200 A300 A940 B114 B115 B701 B712 B713 B720 B815 B834 C108  
C802 C803 C804 C805 C807 M411 M782 M903 M904 P220 Q130 R043;  
9719-B3801-M  
- [02] A100 A200 A940 B114 B701 B712 B720 B831 C108 C802 C803 C804 C805  
C807 M411 M782 M903 M904 P220 Q130 R043; 9719-B3802-M  
- [03] A100 A200 A300 A400 A500 A600 A940 B115 B702 B713 B720 B815 B833  
C108 C802 C803 C804 C805 C807 M411 M782 M903 M904 P220 Q130 R043;  
9719-B3803-M  
- [04] A220 A940 B114 B701 B712 B720 B831 C108 C802 C803 C804 C805 C807  
M411 M782 M903 M904 M910 P220 Q130 R043; R01550-M; 1550-U  
- [05] A422 A940 C108 C550 C730 C801 C802 C803 C804 C805 C807 M411 M782  
M903 M904 M910 P220 Q130 R043; R01966-M; 1966-U  
- [06] A540 A940 B115 B701 B713 B720 B815 B831 C108 C802 C803 C804 C805  
C807 M411 M782 M903 M904 P220 Q130 R043; R04551-M  
PA - (TORA ) TORAY IND INC  
PN - JP9057923 A 19970304 DW199719 B32B27/36 004pp  
PR - JP19950220660 19950829  
XA - C1997-067019  
XIC - A01N-059/16 ; A01N-061/00 ; B05D-007/04 ; B05D-007/24 ; B29C-047/06 ;  
B29C-055/12 ; B29K-067/00 ; B29L-009/00 ; B32B-027/18 ; B32B-027/36 ;  
C08J-007/04 ; C08K-003/08 ; C08L-067/00  
XP - N1997-171736  
AB - J09057923 An antibacterial stretched polyester composite film consists  
of a layer (A) which contains inorganic cpds. contg. silver and a  
layer (B). It has a laminated structure of A/B or A/B/A.  
- Pref. the composite film is produced by fusing and extruding layer (A)  
and layer (B). Layer (A) is formed on layer (B) by coating.  
- The inorganic cpd. is obtd. by loading silver ions on inorganic cpds.  
like zeolite, zirconium, phosphate, montmorillonite, hydroxyapatite,  
phosphoric acid double salt, tripolyphosphate, magnesium  
aluminosilicate, calcium silicate, titanium oxide and others. The base  
polyester film is a polyethylene terephthalate, polypropylene  
terephthalate, polybutylene terephthalate or polyethylene naphthalate  
film. The inorganic cpds. are particles with up to 3  $\mu$ m. dia. and  
are contained in an amt. of 2-10 wt.%.  
- USE - For book covers, food packaging, interior cover, labels,  
stickers or touch panels.  
- ADVANTAGE - The new film provides a higher anti-bacterial performance  
over a long time.  
- (Dwg.0/0)  
CN - 9719-B3801-M 9719-B3802-M 9719-B3803-M R01550-M R01966-M R04551-M

DRL - 1550-U 1966-U

IW - ANTIBACTERIAL STRETCH POLYESTER COMPOSITE FILM BOOK COVER FOOD PACKAGING  
CONSIST FIRST LAYER CONTAIN INORGANIC COMPOUND CONTAIN SILVER SECOND  
LAYER LAMINATE SPECIFIC STRUCTURE

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LAYER LAMINATE SPECIFIC STRUCTURE

NC - 001

OPD - 1995-08-29

ORD - 1997-03-04

PAW - (TORA ) TORAY IND INC

TI - Antibacterial stretched polyester composite film for e.g. book covers,  
food packaging, etc. - consists of first layer contg. inorganic cpds.  
contg. silver, and second layer which are laminated in specific  
structure

A01 - [001] 018 ; P0884 P1978 P0839 H0293 F41 D01 D11 D10 D19 D18 D31 D50  
D63 D90 E21 E00 ; S9999 S1285-R ;

- [002] 018 ; P1989 P1978 P0839 H0293 D01 D10 D11 D18 D20 D32 D50 D63  
D93 D78 E00 E22 F41 F90 ; S9999 S1285-R ;

- [003] 018 ; P0895 P1978 P0839 H0293 F41 D01 D11 D10 D19 D18 D31 D50  
D63 D92 E21 E00 ; S9999 S1285-R ;

- [004] 018 ; ND01 ; Q9999 Q7818-R ; ND00 ; K9574 K9483 ; K9687  
K9676 ; K9698 K9676 ; B9999 B5243-R B4740 ; Q9999 Q6780 ; Q9999  
Q7589-R ; Q9999 Q7783 ; Q9999 Q7283 ; N9999 N5970-R ; N9999 N7192  
N7023 ;

- [005] 018 ; Ag 1B Tr ; A999 A044-R ; B9999 B5209 B5185 B4740 ;  
S9999 S1456-R ;

- [006] 018 ; G3441 D00 F80 Al 3A Si 4A O- 6A ; A999 A748 ; S9999  
S1456-R ; B9999 B5209 B5185 B4740 ;

- [007] 018 ; D00 D09 Zr 4B Tr ; A999 A748 ; S9999 S1456-R ; B9999  
B5209 B5185 B4740 ;

- [008] 018 ; F53 ; A999 A748 ; S9999 S1456-R ; B9999 B5209 B5185  
B4740 ;

- [009] 018 ; D00 F80 Mg 2A Al 3A ; R01550 D00 F80 Ca 2A O- 6A Si 4A ;  
R01966 D00 F20 Ti 4B Tr O- 6A ; A999 A748 ; S9999 S1456-R ; B9999  
B5209 B5185 B4740 ;